



Cancer Genetics Branch
National Human Genome Research Institute
National Institutes of Health
50 South Drive, Bldg. 50, Room 5347
Bethesda, Maryland 20892-8000
Phone: (301) 451-9390
Fax: (301) 594-0023

Skin Cancer in the Briard

The Ostrander Laboratory at the National Human Genome Research Institute at NIH is conducting research on the genetic susceptibility to squamous cell carcinoma (SCC) of the digit in the Briard. Squamous cell carcinoma (SCC) of the digit is a type of skin cancer and is more aggressive than most SCCs, often involving bone loss and recurrence in multiple toes. When invasive, the cancer can spread to the lung or lymph nodes and ultimately leads to mortality. SCC of the digit is a highly breed specific skin cancer with increased risk found in large black dogs, including the Standard Poodle, Giant Schnauzer, Gordon Setter and Briard. The strong breed predisposition to digital SCC is indicative of a disease with genetic underpinnings and our ultimate goal is to identify the genetic variants responsible for susceptibility to this disease.

For genetics studies such as this one, we require DNA from large numbers of individuals in order to obtain statistically valid results. The Ostrander Lab is soliciting blood samples from any Briard with squamous cell carcinoma of the digit. In addition, we seek samples from Briard over the age of five, with no known cancer to genotype as normal controls. Researchers at the Ostrander Lab will then look at all the dog's chromosomes to try and identify regions of the genome that affected dogs share which unaffected dogs lack.

If your dog meets one of these criteria, please contact **Dana Mosher, Ostrander Lab Samples Manager, for a sampling kit by phone (301-451-9390) or email (mosherd@mail.nih.gov)**. Each kit contains a one page consent form, a pair of vials for collecting 5-10 cc of blood at your veterinarian's office, and instructions for handling the blood. The collection kit comes in a small cardboard mailer tube that protects the blood vials. A return address label is included so that the forms and blood can be sent back to the lab conveniently. Blood can be mailed at room temperature without cold packs.

All genetic and contact information collected for each dog will remain confidential. Specifically, your participation in the study, your dog's pedigree, health information you provide, and any data we get from your dog's DNA sample will not be disclosed to any breeders, Club personnel, the AKC, or the AKC Canine Health Foundation.

The sample you provide will be instrumental in helping to identify the genomic mutations associated with digital SCC. Every sample is precious and provides researchers with new and unique genetic information. Finding the genome location is the first step in what we hope will ultimately lead to a genetic test for digital SCC. If this research is successful, breeders could utilize the test to make informed decisions and reduce the frequency of the disease in the population. A diagnosis of digital SCC often results in the eventual

amputation of the affected toe. Determining the genetic cause of the disease is a necessary first step for developing preventative therapies for dogs at risk.

Thank you so much for supporting canine health research! Our work would not be possible without the participation of responsive owners and club members like you.

Sincerely,

Dana Mosher, B.S.
Samples Manager
Ostrander Canine Genomics Lab
CGB/NHGRI/NIH
301-451-9390